

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently amended) A ~~memory device storing a data structure~~computer
2 system for tracking network behavior, comprising:
3 a processor; and
4 a storage device storing a connection table that maps each node of a
5 network to a record that
6 stores information about traffic to or from the node and between
7 that node and ~~others~~other nodes in the network[.], and
8 stores information indicating whether the node is operating as a
9 client or a server.
- 1 2. (Currently amended) The ~~computer system~~device of claim 1 wherein
2 the connection table includes a plurality of records that are indexed by source
3 address.
- 1 3. (Currently amended) The ~~computer system~~device of claim 1 wherein
2 the connection table includes a plurality of records that are indexed by destination
3 address.
- 1 4. (Currently amended) The ~~computer system~~device of claim 1 wherein
2 the connection table includes a plurality of records that are indexed by time.

1 5. (Currently amended) The computer system device of claim 1 wherein
2 the connection table includes a plurality of records, that are record objects, which
3 are indexed by source address, destination address and time.

1 6. (Currently amended) The computer system device of claim 1 wherein
2 the connection table is a plurality of connection sub-tables each sub-table having
3 data pertaining to network traffic over different time scales.

1 7. (Currently amended) The computer system device of claim 6 wherein
2 the connection sub-tables include a time-slice connection table that operates on a
3 small unit of time and at least one other sub-table that operates on a larger unit of
4 time than the time slice sub-table.

1 8. (Currently amended) The computer system device of claim 7 wherein
2 the at least one other sub-table holds records received ~~from all from~~ collectors
3 over the time scale of the table.

1 9. (Currently amended) The computer system device of claim 5 wherein an
2 address ~~the addresses~~-indexing the connection table ~~are IP addresses~~ comprises an
3 IP address.

1 10 (Currently amended) The computer system device of claim 1 wherein
2 ~~the addresses~~ an address indexing the connection table ~~include~~ includes a physical
3 layer address to IP address map that is used to determine Host ID.

1 11. (Currently amended) The computer system device of claim 1 wherein
2 ~~the host a host~~ record of a first host maps that first host to a second host that
3 communicates with the first host to a host pair record object that has information

4 about ~~all the~~ traffic from the first to the second host and from the second host to
5 the first host.

1 12. (Currently amended) The computer system~~device~~ of claim 1 wherein
2 the connection table includes two level mapping that enables a consuming device
3 to obtain summary information about one host for a first level mapping and about
4 ~~the traffic~~traffic between any pair of hosts, in either direction, between a first ~~one~~
5 ~~of the hosts~~host of the any pair to a second ~~one of the hosts~~host of the any pair
6 and from the second ~~one of the hosts~~host of the any pair to the first ~~one of the~~
7 ~~hosts~~host of the any pair for a second level mapping.

1 13. (Currently amended) The computer system~~device~~ of claim 1 wherein
2 the connection table comprises a plurality of host records, a host record stores a
3 measure of the number of bytes, packets, and connections that occurred between
4 hosts during a time-period.

1 14. (Currently amended) The computer system~~device~~ of claim 13, wherein
2 data in the host record is organized by well known transport protocols and well-
3 known application-level protocols.

1 15. (Currently amended) The computer system~~device~~ of claim 13, wherein
2 host records have no specific memory limit.

1 16. (Currently amended) The computer system~~device~~ of claim 1 wherein
2 for application-level protocols and for every pair of hosts, the connection table
3 stores statistics for traffic between ~~[[the]]~~ hosts.

1 17. (Currently amended) The computer system~~device~~ of claim 16 wherein
2 the connection table stores protocol-specific records as (protocol, count) key-
3 value pairs.

1 18. (Currently amended) A computer system~~memory device storing a data~~
2 ~~structure~~ for tracking network behavior, the computer system~~data structure~~
3 comprising:
4 a processor; and
5 _____ a storage device storing a connection table that maps each node of a
6 network to a record that
7 stores connection information about traffic to or from the node and
8 between that node and ~~others~~ other nodes that have connections with the
9 node in the network, and
10 stores information indicating whether the node is operating as a
11 client or as a server,
12 the connection table indexed according to at least a first one of
13 source address, destination address and ~~time;~~ time; and
14 the connection table further including in the records fields for
15 storing statistical information for traffic between [[the]] hosts.

1 19 (Currently amended) The computer system~~device~~ of claim 18 wherein
2 the plurality of records is record objects.

1 20. (Currently amended) The computer system~~device~~ of claim 18 wherein
2 the connection table is a second plurality of connection sub-tables, each sub-table
3 having data pertaining to network traffic over different ones of corresponding
4 second plurality of time scales.

1 21. (Currently amended) The computer system~~device~~ of claim 18 wherein
2 the connection sub-tables include a time-slice connection table that operates on a
3 small unit of time and at least one other sub-table that operates on a larger unit of
4 time than the time slice sub-table.

1 22. (Currently amended) The computer system~~device~~ of claim 18 wherein
2 the at least one other sub-table holds records received ~~from all~~from collectors in
3 the network over the time scale of the table.

1 23. (Currently amended) The computer system~~device~~ of claim 18 wherein
2 ~~the addresses an address~~ indexing the connection table ~~are IP-addresses, comprises~~
3 an IP address.

1 24. (Currently amended) The computer system~~device~~ of claim 23 wherein
2 ~~the addresses an address~~ indexing the connection table ~~include~~includes a physical
3 layer address to IP address map that is used to determine Host ID.
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5 25. (Currently amended) The computer system~~device~~ of claim 18 wherein
6 ~~the host a host~~ record of a first host maps that first host to a second host that
7 communicates with the first host to a host pair record that has information about
8 ~~all the~~ traffic from the first to the second host and from the second host to the first
9 host.

1 26. (Currently amended) The computer system~~device~~ of claim 18 wherein
2 the connection table includes two level mapping that enables a consuming device
3 to obtain summary information about one host for a first level mapping and about
4 the traffic between any pair of hosts, in either direction, between a first ~~one of the~~
5 ~~hosts~~host of the any pair to a second ~~one of the hosts~~host of the any pair and from

6 the second ~~one of the hosts~~host of the any pair to the first ~~one of the hosts~~host of
7 the any pair for a second level mapping.

1 27. (Currently amended) The ~~computer system~~device of claim 18 wherein
2 the connection table comprises a plurality of host records, a host record stores, a
3 measure of the number of bytes, packets, and connections that occurred between
4 hosts during a time-period.

1 28. (Currently amended) The ~~computer system~~device of claim 27 wherein
2 data in the host record is organized by well known transport protocols and well-
3 known application-level protocols.

1 29. (Currently amended) The ~~computer system~~device of claim 28 wherein
2 for application-level protocols and for every pair of hosts, the connection table
3 stores statistics for traffic between [[the]] hosts.

1 30 (Currently amended) The ~~computer system~~device of claim 28 wherein
2 the connection table stores protocol-specific records as (protocol, count) key-
3 value pairs.